determining productivity in the past,[3] AT&T has now changed its view. AT&T now claims that earnings are a better way of measuring productivity. It is evident AT&T's only reason for attempting to measure productivity using earnings is to produce a higher offset for the LECs. However, as USTA and others have demonstrated, earnings do not measure output and input.[4] For that reason alone, AT&T's model is theoretically incorrect. Resetting the productivity offset to reduce LEC earnings to a specific level is rate-of-return regulation.[5]

The following are the major flaws in AT&T's position on productivity in this docket:

1. The AT&T model does not measure productivity. This model starts with interstate accounting results which are based on arbitrary accounting and cost allocation rules including separations and depreciation. AT&T's model does not correct for any of these adjustments. (For example, the Price Cap LECs' earnings from 1991 through 1993 could be restated from 12.39% to 11.50% if

---

[3] AT&T employed Christensen Associates to perform a TFP study that AT&T filed in United States v. AT&T, Civ. Action No. 74-1698 (D.D.C. filed Nov. 20, 1974.) The purpose of that study was to determine the productivity of Bell System. AT&T advocated Christensen's methodology as the appropriate method for determining productivity.

[4] See Ex Parte letter to Mr. William F. Caton from Jo Ann Goddan, Pacific Telesis, dated December 9, 1994; Ex Parte letter to Mr. William F. Caton from Maureen Keenan, Bell Atlantic Network Services, Inc., dated November 8, 1994; Ex Parte letter to Mr. William F. Caton from Maureen Keenan, Bell Atlantic Network Services, Inc. dated November 10, 1994; Ex Parte letter to Mr. William F. Caton from Maurice P. Talbot, Jr., BellSouth, dated December 8, 1994. USTA Reply Comments, June 29, 1994, Attachment 4, Economic Performance of the LEC Price Cap Plan: Reply Comments by National Economic Research Associates, Inc., pp 33-36.

[5] FCC policy certainly favors price regulation over rate of return. See, e.g., Price Cap Performance Review for Local Exchange Carriers 9 FCC RD 1687, 1688 (1994) ("Moving from traditional rate of return regulation to price cap regulation was a significant improvement and response to these dramatic changes. ... In contrast to rate-of-return regulation, a regulatory system that caps prices creates profit incentives similar to those in fully competitive markets and generates positive motivations for reasonable rates, innovation, productivity growth, and accurate cost allocation, while reducing regulatory burdens.")

the most recent FCC recommended depreciation rates were used.[6])
This is just one of many examples of how earnings can be affected
without any change in experienced productivity.

2.   In its "study", AT&T arbitrarily inflated the price cap LECs'
earnings. It did so by increasing earnings by the amount by which
the LECs priced below their ceilings. AT&T assumes incorrectly
that a company that prices below its PCI could increase its rates
with no impact on demand. This assumption ignores the effect of
price elasticity. If a company could increase rates without having
any impact on demand, a company would be priced at its ceiling.
However, due to competitive pressures, many LECs have priced below
their cap. The AT&T method, if relied upon, would reduce any
incentive for a price cap company to price below its cap.

3.   In its formula, AT&T supposedly used half of the productivity
and GNP-PI amounts for the time period from January through June of
1991. AT&T stated that these amounts were obtained from the LECs'
annual Tariff Review Plans (TRPs). The TRPs for this time period
did not include any amounts for GNP-PI or productivity. In fact,
under the Commissions rules, the LEC price cap indices for the
January through June of 1991 time frame were not to be adjusted for
a productivity offset or the GNP-PI.[7] Therefore, AT&T had no basis
for making these adjustments but has overstated LEC productivity as
a result.

4.   AT&T made an error in its methodology related to the July
through December of 1993 period. AT&T used actual 1993 price cap
indices (PCIs) for the entire year and annual revenues but divided
both the GNP-PI and productivity offset by two. The 1993 actual
PCIs reflected the full annual amounts for productivity and GNP-PI.
There is no reason for AT&T to divide the productivity or the GNP-
PI by two.   The result of the error is that AT&T overstates its
productivity calculation.

5.   AT&T further overstates LEC productivity results by assuming
that the average rate of return for the three years equates to a
single year productivity impact. In doing so, AT&T ignores the
compounding effect of the productivity offset. A simple example
will illustrate this problem. Assume that a company earned the
following amounts in excess of 11.25%: year 1 equals $2M, year 2
equals $4M, and year 3 equals $6M -- for a total of $12M. Also
assume that a productivity increase of 1 for the first year equals
$2M. According to AT&T's analysis, the productivity offset should
be increased by 2 ($12M divided by 3 (years) divided by $2M).
However, based on the price cap formula, an increase of 2 to the

_____

     [6]   See Ex Parte letter to Mr. William F. Caton from Mary
McDermott (USTA) dated December 19, 1994 in CC Docket 94-1.

     [7]   47 CFR §61.48(e).

3

productivity offset would impact earnings by the following amounts: year 1 equals $4M, year 2 equals $8M and year 3 equals $12M -- for a total $24 Million. Thus, AT&T's methods overstates the effect on the productivity offset by a factor of two.

6. AT&T criticizes the Christensen study for not utilizing the "50/50" calculation for Carrier Common Line. However, because the Christensen study used Carrier Common Line minutes as a measure of output, use of the "50/50" formula would have resulted in a lower productivity offset for the LECs.

7. AT&T faults the Christensen study for not using FCC prescribed depreciation rates. Those depreciation rates do not measure the decline in the efficiency of assets. Economic depreciation rates are the appropriate measure to use in a TFP study and the Christensen study does so.

8. While attempting to verify the data underlying AT&T's analysis, USTA found that AT&T may have double counted the $1 billion impact of exogenous cost reductions that have already been included in the LECs' price cap indices used by AT&T in its analysis.

9. AT&T claims that the Christensen TFP study should have measured only interstate access, rather than total company, productivity. This claim is mistaken. Total Factor Productivity is the ratio of total output to total input, where total output includes all services provided by the firm and total input includes all resources used. If the provision of interstate services and intrastate services were independent of each other, it would be possible to calculate a separate TFP for each. But interstate and intrastate services have common inputs. Therefore, it is not appropriate to calculate an interstate TFP. Any allocation of the common inputs would be arbitrary and different allocation schemes would produce different results.

10. AT&T claims, without corroborating data, that in the near future LEC input prices are likely to rise more slowly than input prices for the entire U.S. economy. On February 1, 1995, USTA submitted a paper by Christensen Associates that demonstrates that AT&T's position is incorrect. There is no conceptual or empirical basis for adding an input price differential to the productivity study. Christensen Associates and NERA have both proven that there is no difference in the input inflation experienced by the LECs as compared to the overall U.S. economy.[8]

---

[8] See USTA Ex Parte, filed February 1, 1995: An Input Price Adjustment Would Be An Inappropriate Addition to the LEC Price Cap Formula by Dr. Lauritis R. Christensen; and, USTA Reply Comments filed June 26, 1994, Attachment 4, Economic Performance of the LEC Price Cap Plan, pp 23-31.

11.   AT&T argues that moving average TFP understates the trend in productivity growth.   The USTA proposed moving average Total Factor Productivity offset is, by its nature, unbiased since it smooths short term fluctuations in productivity that occur in individual years.   The rolling average, by smoothing annual deviations, captures the real long term trend of the data.   Further, 100% of LEC productivity gains will be automatically passed through to customers via the moving average.

*   *   *   *   *   *

AT&T's model has serious theoretical and mathematical flaws. USTA submits that even if these flaws could be corrected, the result would be an indirect productivity offset based on economic earnings.   However, a direct measure for a productivity offset is preferred. USTA is the only party that has put on the record a direct productivity study that is based on sound economic theory. Therefore the Commission should use the results from the Christensen study in setting the productivity offset.

United States Telephone Association

1401 H Street, N.W., Suite 600
Washington, D.C. 20005-2136
(202) 326-7300
(202) 326-7333 FAX

February 17, 1995 **RECEIVED**

Mr. William F. Caton, Secretary
Federal Communications Commission
1919 M Street NW - Room 222
Washington, D.C.   20554

IFEB 1 7 1995

FEDERAL COMMUNICATIONS COMMISSION
OFFICE OF SECRETARY

RE: Ex Parte Filing
      CC Docket No. 94-1

Dear Mr. Caton:

Attached is a sensitivity analysis prepared for USTA by Christensen Associates on the data correction items for the Christensen LEC TFP study update filed by USTA on January 20, 1995, in this proceeding. A comparison of Attachment A, the results of the TFP study filed by USTA in its comments on May 9, 1994, to each of the individual analysis of the data corrections (Attachments B -F) and to the revised study results (Attachment G) clearly shows the minor impact of the changes.

Frank McKennedy, USTA, met with Mark Uretsky of the Common Carrier Bureau, and Anthony Bush and Alexander Belinfante of the Tariff Division to deliver this analysis on Friday, February 17, 1995.

An original and two copies of this ex parte notice, the attachments and a machine readable disk are being filed in the Office of the Secretary on February 17, 1995. Please include this notice and attached material in the public record of these proceedings.

Respectfully Submitted

Mary McDermott
Vice President - Legal and
Regulatory Affairs

cc: Mark Uretsky
      Anthony Bush
      Alexander Belinfante

February 16, 1995

Attached are the results of the sensitivity analysis on the data
correction items for the Christensen LEC TFP study documented in our
letter of January 18, 1995. The following table demonstrates that the
data corrections, incrementally and in total, have only minor effects on
LEC TFP growth, output growth, input growth, and the LEC-U.S. economy TFP
growth differential. Moreover, given that the majority of these data
corrections have resulted in data that are consistent with officially
reported data, we would not expect to see such corrections on a going-
forward basis.

Attachmen t	1984-1992 LEC TFP Growth	1984-1992 LEC Output Growth	1984-1992 LEC Input Growth	1987-1992 Five-Year TFP Growth Differential**
A	2.6%	3.5%	0.9%	2.6%
B	2.5%	3.5%	1.0%	2.5%
C	2.5%	3.5%	1.0%	2.6%
D	2.5%	3.5%	1.0%	2.6%
E	2.6%	3.5%	0.9%	2.7%
F	2.4%	3.4%	0.9%	2.6%
G	2.4%	3.4%	1.0%	2.5%

**LEC TFP growth less U.S. economy TFP growth

Included in the analysis are: 1984-1992 LEC TFP growth; U.S. economy TFP
growth; LEC-U.S. economy TFP growth differential; LEC input price growth,
U.S. economy input price growth; and LEC-U.S. economy input price growth
differential. Five-year rolling average results are also included. The
results are found in Attachments A through F:

- Attachment A: Results of the original study through 1992;
- Attachment B: 1984 gross stock corrections;
- Attachment C: 1984-92 investment corrections and associated materials
  changes (materials is affected by the capital-to-expense shift);
- Attachment D: 1984-92 TPI corrections;
- Attachment E: 1984-92 labor and materials corrections;
- Attachment F: 1984-92 output corrections; and
- Attachment G: All 1984-1992 corrections incorporated in the 1993
  update

Christensen LEC TFP Study – ORIGINAL 1992 RESULTS

	LEC TFP Growth	BLS US MFP Growth	TFP Growth Differential	LEC Input Price Growth	US Economy Input Price Growth	Input Price Growth Differential
1984						
1985	1.9%	0.5%	1.3%	−0.5%	4.0%	−4.5%
1986	2.7%	1.0%	1.7%	−0.4%	3.8%	−4.2%
1987	2.0%	0.1%	1.9%	2.0%	3.1%	−1.1%
1988	1.9%	0.6%	1.3%	0.1%	4.4%	−4.3%
1989	2.3%	−0.3%	2.6%	−5.4%	4.1%	−9.5%
1990	4.5%	−0.3%	4.8%	12.1%	4.2%	7.9%
1991	1.1%	−1.1%	2.2%	3.6%	2.9%	0.7%
1992	4.0%	1.9%	2.1%	−3.2%	5.1%	−8.3%
Avg 84−92	2.6%	0.3%	2.3%	1.1%	4.0%	−2.9%

FIVE−YEAR ROLLING AVERAGES

5−year avg ending in	LEC TFP Growth	BLS US MFP Growth	TFP Growth Differential	LEC Input Price Growth	US Economy Input Price Growth	Input Price Growth Differential
1989	2.2%	0.4%	1.8%	−0.8%	3.9%	−4.7%
1990	2.7%	0.2%	2.5%	1.7%	3.9%	−2.2%
1991	2.4%	−0.2%	2.6%	2.5%	3.7%	−1.2%
1992	2.8%	0.2%	2.6%	1.4%	4.1%	−2.7%

These are the results of the original 1984−92 Christensen LEC productivity study prior to data revisions.

16−Feb−95

Christensen LEC TFP Study — CORRECTED 1984 GROSS CAPITAL STOCK

	LEC TFP Growth	BLS US MFP Growth	TFP Growth Differential	LEC Input Price Growth	US Economy Input Price Growth	Input Price Growth Differential
1984						
1985	1.7%	0.5%	1.2%	−0.4%	4.0%	−4.4%
1986	2.6%	1.0%	1.6%	−0.3%	3.8%	−4.1%
1987	1.9%	0.1%	1.8%	2.0%	3.1%	−1.1%
1988	1.8%	0.6%	1.2%	0.1%	4.4%	−4.3%
1989	2.2%	−0.3%	2.5%	−5.3%	4.1%	−9.4%
1990	4.4%	−0.3%	4.7%	12.0%	4.2%	7.8%
1991	1.1%	−1.1%	2.2%	3.6%	2.9%	0.7%
1992	4.0%	1.9%	2.1%	−3.2%	5.1%	−8.3%
Avg 84−92	2.5%	0.3%	2.2%	1.1%	4.0%	−2.9%

FIVE−YEAR ROLLING AVERAGES

5−year avg ending in	LEC TFP Growth	BLS US MFP Growth	TFP Growth Differential	LEC Input Price Growth	US Economy Input Price Growth	Input Price Growth Differential
1989	2.0%	0.4%	1.7%	−0.8%	3.9%	−4.7%
1990	2.6%	0.2%	2.4%	1.7%	3.9%	−2.2%
1991	2.3%	−0.2%	2.5%	2.5%	3.7%	−1.3%
1992	2.7%	0.2%	2.5%	1.4%	4.1%	−2.7%

Data corrections for 1984 resulted in a 3% decline in total 1984 gross stock. The majority of this change was due to NYNEX, whose 1984 gross stock fell by 35% as a result of 1984 data corrections. NYNEX 1984 gross capital stock represents 15% of the total 1984 gross capital stock for the price cap LECs in the study. For 1984, Bell Atlantic and Southern New England also had small negative revisions to their gross capital stocks, while Ameritech and GTE had small positive corrections.

16−Feb−95

Christensen LEC TFP Study – CORRECTED INVESTMENT AND ASSOCIATED MATERIALS

	LEC TFP Growth	BLS US MFP Growth	TFP Growth Differential	LEC Input Price Growth	US Economy Input Price Growth	Input Price Growth Differential
1984						
1985	1.7%	0.5%	1.2%	−0.5%	4.0%	−4.5%
1986	2.7%	1.0%	1.7%	−0.4%	3.8%	−4.2%
1987	2.0%	0.1%	1.9%	2.0%	3.1%	−1.1%
1988	1.9%	0.6%	1.3%	0.1%	4.4%	−4.3%
1989	2.3%	−0.3%	2.6%	−5.4%	4.1%	−9.5%
1990	4.6%	−0.3%	4.9%	12.1%	4.2%	7.9%
1991	1.1%	−1.1%	2.2%	3.6%	2.9%	0.7%
1992	4.0%	1.9%	2.1%	−3.2%	5.1%	−8.3%
Avg 84−92	2.5%	0.3%	2.2%	1.0%	4.0%	−2.9%

FIVE−YEAR ROLLING AVERAGES

5−year avg ending in	LEC TFP Growth	BLS US MFP Growth	TFP Growth Differential	LEC Input Price Growth	US Economy Input Price Growth	Input Price Growth Differential
1989	2.1%	0.4%	1.7%	−0.8%	3.9%	−4.7%
1990	2.7%	0.2%	2.5%	1.7%	3.9%	−2.2%
1991	2.4%	−0.2%	2.6%	2.5%	3.7%	−1.2%
1992	2.8%	0.2%	2.6%	1.4%	4.1%	−2.7%

Overall, total investment over the 1984−92 period changed by 0.9% because of data corrections. The largest change was for GTE, whose total 1984−92 investment increased due to a typographical error in one year. Other companies with very minor corrections (all resulting in in small increases in total 1984−92 investment) were Ameritech (change in one number only), Bell Atlantic, Nynex, Pacific Telesis (change in one number only), and Southern New England.

Christensen LEC TFP Study – CORRECTED TPI'S

	LEC TFP Growth	BLS US MFP Growth	TFP Growth Differential	LEC Input Price Growth	US Economy Input Price Growth	Input Price Growth Differential
1984						
1985	1.9%	0.5%	1.4%	−0.4%	4.0%	−4.4%
1986	2.7%	1.0%	1.7%	0.8%	3.8%	−3.0%
1987	1.9%	0.1%	1.8%	1.9%	3.1%	−1.2%
1988	1.9%	0.6%	1.3%	−2.9%	4.4%	−7.3%
1989	2.2%	−0.3%	2.5%	−3.5%	4.1%	−7.6%
1990	4.5%	−0.3%	4.8%	12.0%	4.2%	7.8%
1991	1.1%	−1.1%	2.2%	1.1%	2.9%	−1.8%
1992	4.0%	1.9%	2.1%	4.5%	5.1%	−0.6%
Avg 84−92	2.5%	0.3%	2.2%	1.7%	4.0%	−2.3%

FIVE−YEAR ROLLING AVERAGES

5−year avg ending in	LEC TFP Growth	BLS US MFP Growth	TFP Growth Differential	LEC Input Price Growth	US Economy Input Price Growth	Input Price Growth Differential
1989	2.1%	0.4%	1.7%	−0.8%	3.9%	−4.7%
1990	2.6%	0.2%	2.4%	1.7%	3.9%	−2.3%
1991	2.3%	−0.2%	2.5%	1.7%	3.7%	−2.0%
1992	2.7%	0.2%	2.6%	2.3%	4.1%	−1.9%

Telephone Plant Index changes were due primarily to the inclusion of GTE in the calculations. GTE TPI's were not available for the original study and were added for the 1993 update. Bell Atlantic provided minor corrections for the 1984−92 period, and Southwestern Bell provided updated TPI's for 1991 and 1992.

16−Feb−95

Christensen LEC TFP Study – CORRECTED LABOR AND MATERIALS

	LEC TFP Growth	BLS US MFP Growth	TFP Growth Differential	LEC Input Price Growth	US Economy Input Price Growth	Input Price Growth Differential
1984						
1985	1.9%	0.5%	1.3%	−0.0%	4.0%	−4.0%
1986	3.1%	1.0%	2.1%	0.2%	3.8%	−3.6%
1987	2.0%	0.1%	1.9%	1.9%	3.1%	−1.2%
1988	2.0%	0.6%	1.4%	−0.3%	4.4%	−4.7%
1989	2.4%	−0.3%	2.7%	−5.5%	4.1%	−9.6%
1990	4.7%	−0.3%	5.0%	11.9%	4.2%	7.7%
1991	1.2%	−1.1%	2.3%	3.8%	2.9%	0.9%
1992	3.8%	1.9%	1.9%	−3.1%	5.1%	−8.2%
Avg 84−92	2.6%	0.3%	2.3%	1.1%	4.0%	−2.8%

FIVE−YEAR ROLLING AVERAGES

5−year avg ending in	LEC TFP Growth	BLS US MFP Growth	TFP Growth Differential	LEC Input Price Growth	US Economy Input Price Growth	Input Price Growth Differential
1989	2.3%	0.4%	1.9%	−0.8%	3.9%	−4.6%
1990	2.9%	0.2%	2.6%	1.6%	3.9%	−2.3%
1991	2.5%	−0.2%	2.7%	2.4%	3.7%	−1.4%
1992	2.8%	0.2%	2.7%	1.4%	4.1%	−2.8%

Composite labor expenses were increased by a total of 1.4% over the 1984−1992 period, with a corresponding reduction in materials expense, leaving the sum of labor plus materials expense unchanged. This was due to corrections by US West.

Christensen LEC TFP Study – CORRECTED OUTPUT

	LEC TFP Growth	BLS US MFP Growth	TFP Growth Differential	LEC Input Price Growth	US Economy Input Price Growth	Input Price Growth Differential
1984						
1985	1.3%	0.5%	0.7%	−0.5%	4.0%	−4.5%
1986	2.7%	1.0%	1.7%	−0.4%	3.8%	−4.2%
1987	1.9%	0.1%	1.8%	2.0%	3.1%	−1.1%
1988	2.1%	0.6%	1.6%	0.1%	4.4%	−4.3%
1989	2.0%	−0.3%	2.3%	−5.4%	4.1%	−9.5%
1990	4.5%	−0.3%	4.8%	12.1%	4.2%	7.9%
1991	1.1%	−1.1%	2.3%	3.6%	2.9%	0.7%
1992	3.9%	1.9%	2.0%	−3.2%	5.1%	−8.3%
Avg 84−92	2.4%	0.3%	2.1%	1.1%	4.0%	−2.9%

FIVE−YEAR ROLLING AVERAGES

5−year avg ending in	LEC TFP Growth	BLS US MFP Growth	TFP Growth Differential	LEC Input Price Growth	US Economy Input Price Growth	Input Price Growth Differential
1989	2.0%	0.4%	1.6%	−0.8%	3.9%	−4.7%
1990	2.7%	0.2%	2.4%	1.7%	3.9%	−2.2%
1991	2.3%	−0.2%	2.5%	2.5%	3.7%	−1.2%
1992	2.7%	0.2%	2.6%	1.4%	4.1%	−2.7%

BellSouth data corrections resulted in total intrastate access billed revenues increasing by 3.8% over the 1984−92 period, and total long distance billed revenues increasing by 2.0% over the 1984−92 period.

16−Feb−95

Christensen LEC TFP Study – ALL CORRECTIONS

	LEC TFP Growth	BLS US MFP Growth	TFP Growth Differential	LEC Input Price Growth	US Economy Input Price Growth	Input Price Growth Differential
1984						
1985	1.1%	0.5%	0.6%	0.1%	4.0%	−3.9%
1986	2.8%	1.0%	1.8%	1.3%	3.8%	−2.5%
1987	1.8%	0.1%	1.7%	1.7%	3.1%	−1.4%
1988	2.1%	0.6%	1.5%	−3.2%	4.4%	−7.6%
1989	2.0%	−0.3%	2.3%	−3.7%	4.1%	−7.8%
1990	4.6%	−0.3%	4.9%	11.9%	4.2%	7.7%
1991	1.2%	−1.1%	2.3%	1.3%	2.9%	−1.6%
1992	3.5%	1.9%	1.6%	4.4%	5.1%	−0.7%
Avg 84−92	2.4%	0.3%	2.1%	1.7%	4.0%	−2.2%

FIVE−YEAR ROLLING AVERAGES

5−year avg ending in	LEC TFP Growth	BLS US MFP Growth	TFP Growth Differential	LEC Input Price Growth	US Economy Input Price Growth	Input Price Growth Differential
1989	2.0%	0.4%	1.6%	−0.7%	3.9%	−4.6%
1990	2.7%	0.2%	2.5%	1.6%	3.9%	−2.3%
1991	2.4%	−0.2%	2.6%	1.6%	3.7%	−2.1%
1992	2.7%	0.2%	2.5%	2.2%	4.1%	−2.0%

This table reports the combined impact of all data corrections reported in Attachments B through F, and represents the 1984−92 results of the 1993 update to the Christensen LEC TFP study.

16−Feb−95

United States Telephone Association

1401 H Street, N.W., Suite 600
Washington, D.C. 20005-2136
(202) 326-7300
(202) 326-7333 FAX

February 23, 1995

Mr. William F. Caton, Secretary
Federal Communications Commission
1919 M Street NW - Room 222
Washington, D.C.   20554

RE: Ex Parte Filing
       CC Docket No. 94-1

Dear Mr. Caton:

Attached is USTA's response to MCI's ex parte presentation to the FCC Tariff Division Staff on October 24, 1994 regarding the USTA update of the FCC's Frentrup/Uretsky short term productivity study for local exchange carriers. USTA filed the updated study with its reply comments on June 29, 1994 in this proceeding.

An original and two copies of this ex parte notice and the attachments, including a machine readable disk containing the copies of the original FCC Staff Lotus 123 spreadsheets and the USTA updated spreadsheet are being filed in the Office of the Secretary on February 23, 1995. Please include this notice and attached material in the public record of these proceedings.

Respectfully Submitted

Mary McDermott
Vice President - Legal &
Regulatory Affairs

cc: Mark Uretsky
       Anthony Bush
       Alexander Belinfante
       ITS

Overview

On October 24, 1994, MCI met with Commission staff from the Tariff Division to discuss USTA's update of the FCC short-term productivity study for local exchange carriers. MCI's ex parte presentation alleged that USTA's calculation of the productivity factor is different from the method used by the Commission in the original study in two significant ways. First, MCI alleged that the USTA update used average values for *GNP-PI* and *g*, the growth in minutes of use per line, when the original Commission study did not. Second, MCI alleged that USTA used inconsistent weights to compute the weighted average change for the Per Line and Balanced 50/50 formulas. These allegations are completely without merit.

Tariff Division staff at the Commission provided USTA with the two Lotus 123 spreadsheets which were used to make the Commission's original calculations. These spreadsheets clearly show that the Commission's original study used average values for *GNP-PI* and *g* <u>and</u> employed the same weighting scheme replicated by USTA. These spreadsheets also clearly produce the same results as reported in *A Study of Local Exchange Carrier Post-Divestiture Switched Access Productivity*, included as Appendix C of the <u>Second Report and Order</u> in CC Docket No. 87-313. USTA simply updated the Commission's original study using the identical methodology.

While it is true that USTA did use average values for *GNP-PI* and *g*, it is <u>not</u> true that "the original study used the values in each of the years," as alleged by MCI. As is documented below and in the two Commission spreadsheets (attached), the Commission's original calculations clearly used average values for *GNP-PI* and *g*. Again, the USTA update of the FCC short-term productivity study for local exchange carries follows the methodology of the Commission's original study *exactly*.

Similarly, it is also true that USTA used different weights to compute the average change for the Per Line and Balanced 50/50 formulas. Again, USTA followed the Commission's method exactly. As is documented below and in the two spreadsheets obtained from Tariff Division staff, the Commission's original calculations also used different weights to compute the average change for the Per Line and Balanced 50/50 formulas.

Finally, because of MCI's allegations, USTA recalculated the unitary X using the Balanced 50/50 formula but employing the assumptions cited in the MCI ex parte, letting the values of *GNP-PI* and *g* change annually and changing the weighting scheme. The resultant unitary X does not increase as reported in the MCI ex parte (from "2.67% to 3.38%"). In fact, except for small differences due to rounding, using annual values of *GNP-PI* and *g* versus average values makes no difference at all, and using the weighting scheme that MCI alleges is correct reduces the value of X.

USTA finds that making the adjustments MCI alleges are necessary does not produce the results reported by MCI in its ex parte. Rather, the answer is actually lower--falling from USTA's 2.67 percent to an MCI-adjusted 2.24 percent.

MCI Allegation

> USTA used the average values for GNP-PI and g, the growth in minutes of use per line, in its computation of the PCI changes, whereas the original study used the values in each of the years. (Formulas are in cells M26.M32, M33.M39, and Q26.Q32 of XCALCLEC.WK3)

Detailed Response

USTA followed the Commission's method which used average values for GNP-PI and g exactly. It is true that USTA did use the average values for GNP-PI and g in calculations to update the Commission's calculation of X to include the 1991 and 1992 access periods. It is not true that "the original study used the values in each of the years," as alleged by MCI.

The Commission's original study results were reported in *A Study of Local Exchange Carrier Post-Divestiture Switched Access Productivity*, included as Appendix C of the Second Report and Order in CC Docket No. 87-313. The Commission relied upon these study results to determine the appropriate value for the productivity offset to be included in the price cap adjustment formula. The study was conducted at the Tariff Division of the Common Carrier Bureau. Tariff Division staff provided USTA with two Lotus 123 spreadsheets [INDIVX and UNITARYX] which were used to make the original calculations relied upon by the Commission.

Both INDIVX and UNITARYX, the two spreadsheets given to USTA and used by the Commission, clearly used average values for GNP-PI and g.

Regarding the Average Value of GNP-PI

INDIVX and UNITARYX both use an average value of GNP-PI equal to 3.90% (see cells L14 and B3, respectively).[1] The Second Report and Order (Appendix C) provides the GNP-PI observations related to each access period which are used to produce this average. These data can be found on page 3 of Chart DATA in Appendix C. These data were used by USTA to confirm the 3.90%

---

[1] Appended to this document are print-outs which display a *value view* and *text view* of all cells referenced herein for the Commission's two spreadsheets, INDIVX and UNITARYX, and USTA's spreadsheet, XCALCLEC. A bold outline designates the primary cells discussed in this document,
while a normal outline calls attention to all cells related to the calculations. The value view shows the value from calculations and/or formatting of a cell's contents. The text view indicates the formulas used to calculate the values shown.

calculation. An unambiguous reference to the use of 3.9% as the average value of GNP-PI used in the Commission's calculations can be found in ¶13 of Appendix C.

The USTA spreadsheet XCALCLEC likewise computes an updated average GNP-PI also based on GNP-PI observations related to each access period (see cells T42.T48 and U42.U48 for this data). The calculations which develop each access period's value of the change in GNP-PI can be seen in cells S42.S48. See cell B2 for the average computation which results in a value of 4.06%.

The method employed by USTA to convert observations of GNP-PI relating to individual access periods to an average GNP-PI for the analysis period is in all ways exactly identical to the Commission's method.

Regarding the Average Value of g

INDIVX and UNITARYX both use an average value of g. INDIVX uses an average g equal to 6.69%, derived from an assumed 10% growth in CL minutes and an assumed 3.1% growth in lines (see cell H45 in INDIVX for the calculation and ¶13 of Appendix C for a description of the calculation), to make calculations relating to the individual historic values of X for both Common Line Per Line (2.32) and Traffic Sensitive (3.64). UNITARYX uses an average value of g equal to 4.75%, derived from an assumed 8% growth in minutes and an assumed 3.1% growth in lines (see cell B1 in UNITARYX and ¶13 of Appendix C), to calculate the prospective unitary X (3.43) reported on Chart PROD in Appendix C.

USTA determined that the 6.69% value could be approximated by using the growth rates in unadjusted CL minutes and lines from the Chart RATE in Appendix C. Using these values, the historical value of g over the analysis period was 6.81%. Since USTA was engaged in the performance of an historical update of the Commission's methods, the same technique was used. The historical growth rate of minutes was 9.47% (see cell Y24 in XCALCLEC), and the historical growth rate of lines was 3.08% (see cell AC24 in XCALCLEC). These values were used in exactly the same manner as the assumed historic values were used in the Commission's calculations to obtain the updated historic average value of g equal to 6.19% (see cell B1 in XCALCLEC).

MCI Allegation

> USTA used inconsistent weights to compute the weighted average change for the per-line and balanced 50/50 formulas. (The incorrect formula is in cell E16 of XCALCLEC.WK3, for the per line formula. The correct formula is in cell E28, for the 50/50 formula.)

Detailed Response

USTA followed the Commission's method for computing weighted average changes for the Per Line and Balanced 50/50 formulas exactly. It is true that USTA used different weights to compute the average change for the Per Line and Balanced 50/50 formulas. However, these weights are constructed the same way as the Commission's weights, thus replicating the Commission's methods.

INDIVX computes the weighted average change for the Per Line formula using the individual historic values of X for Common Line Per Line (2.32) (see cell L15 in INDIVX) and Traffic Sensitive (3.64) (see cell O15 in INDIVX). These weights are 3372/(8886 + 8037) applied to Common Line Per Line and 8037/(8886 + 8037) applied to Traffic Sensitive (see cell O54 in INDIVX). UNITARYX uses different weights for the weighted average change in the Balanced 50/50 formula to determine the prospective unitary X (3.43) (see cell B7 in UNITARYX). These weights are 3372/(3372 + 8037) applied to Common Line Per Line and 8037/(3372 + 8037) applied to Traffic Sensitive (see cell G18 in UNITARYX).

These weights are based on data provided in the Commission's INDIVX spreadsheet and the Commission's description of the calculation in ¶12 of Appendix C. INDIVX indicates totals for CL Rev and SLC Rev of $8,853,290 (see cell C45 in INDIVX) and $5,473,989 (see cell D45 in INDIVX). By definition, CCL Rev equals the difference between CL Rev and SLC Rev or $3,379,301. USTA thus interpreted the weight from INDIVX applied to Common Line Per Line given above as

CCL Rev/(CL Rev + TS Rev),

the weight from INDIVX applied to Traffic Sensitive given above as

TS Rev/(CL Rev + TS Rev),

the weight from UNITARYX applied to Common Line Per Line given above as

$$CCL\ Rev/(CCL\ Rev + TS\ Rev)$$

and the weight from UNITARYX applied to Traffic Sensitive given above as

$$TS\ Rev/(CCL\ Rev + TS\ Rev).$$

USTA employed identically the same method as the Commission in establishing the weights in XCALCLEC. For the Per Line computation in cell E16 using the individual historic values of Common Line Per Line and Traffic Sensitive, USTA used the following weights, as the Commission did:

$$(CCL\ Rev)/(CL\ Rev + TS\ Rev)$$

and

$$TS\ Rev/(CL\ Rev + TS\ Rev).$$

USTA then, in a manner identically the same as the Commission's, used different weights for the Balanced 50/50 computation in cell E28 to determine the historical unitary X:

$$(CCL\ Rev)/(CCL\ Rev + TS\ Rev)$$

and

$$TS\ Rev/(CCL\ Rev + TS\ Rev).$$

The USTA calculation of the historical unitary X which MCI alleges to be incorrect was reported in Economic Performance of the LEC Price Cap Plan: Reply Comments as 2.67 percent. In consideration of the expressed concern about the weights used in the *original* calculations contained in the spreadsheets provided to the USTA by Tariff Division staff, USTA has recalculated the value of the historical unitary X for the period 1984 through 1992 using the weighting scheme that MCI alleges to be correct. Using the weighting scheme that MCI alleges to be correct, the historical unitary X for the period 1984 through 1992 is 2.23 percent.

	A	I	J	K	L
11		Assume:			
12					
13					CL X FACTOR
14				GNP-PI	3.90%
15				Per Line X	2.32%
16				50/50 X	5.61%

	A	I	J	K	L
11	Assume:				
12					
13					CL X FACTOR
14				GNP-PI	0.039
15				Per Line X	2.32%
16				50/50 X	5.61%

	A	B
1	g =	4.75%
2	gbar =	2.60%
3	gnppi =	3.90%
4	Per Line X =	2.97%
5	50/50 X =	4.17%
6	alpha =	61.38%
7	Compromise X =	3.43%

	A	A	B
1		g =	4.75%
2		gbar =	2.60%
3		gnppi =	0.039
4		Per Line X =	2.97%
5		50/50 X =	4.17%
6		alpha =	61.38%
7		Compromise X =	3.43%

	A	B	S	T	U	V	W
1	g =	6.19%	-2.80688266	7	1		19.02828287
2	gnppi =	4.06%	-2.67211322	19	1	8 PERIOD	19.11356205
3	alpha (% slc) =	65.71%	-2.63703958	32	1	TOTAL SW RATE/MOU	19.10820345
4			-2.71890020	50	1	REGRESSION	19.31459223
5		0.00%	-2.74161328	63.5	1	------------------------------	19.44856070
6	INDIVX	4.28%	-2.78584210	74	1		19.53857247
7	--------------------------		-2.76115241	86	1		19.60447847
8		CL	-2.79317982	98	1		19.67145657
9		---------------------					
10	Per Line X =	-0.08%					
11	Compromise X =	2.96%	Regression Output:				
12			Constant			0	Constant
13			Std Err of Y Est			0.0597	Std Err of Y Est
14	CL PCI		R Squared			0.1624	R Squared
15	--------------------------		No. of Observations			8	No. of Observat
16	Per Line	98.07%	Degrees of Freedom			6	Degrees of Fre
17							
18			X Coefficient(s)		-0.0007	-2.6994	X Coefficient(s)
19	UNITARYX		Std Err of Coef.		0.0007	0.0428	Std Err of Coef.
20	--------------------------						
21							
22	Per Line X =	1.64%			0.0669		
23	Compromise X =	2.67%			0.0625		
24					-0.90%		
25							
26							
27							
28	Compromise						

	GNP-PI*** START QUARTER	GNP-PI*** END QUARTER	analysis period	data source period
37				data
38	GNP-PI***	GNP-PI***	analysis	source
39	START QUARTER	END QUARTER	period	period
40	gnp-pi			
41	4.12% 218.7	227.7	1 = 6/84 - 5/85	82/4 83/4
42	4.17% 227.6	237.1	2 = 6/85 - 5/86	83/4 84/4
43	3.45% 110	113.8	3 = 7/86 - 6/87	84/4 85/4
44	3.40% 114.7	118.6	4 = 1988	86/2 87/2
45	4.34% 119.7	124.9	5 = 4/89 -12/89	87/3 88/3
46	4.87% 123.3	129.3	6 = 1990	88/2 89/2
47	4.80% 131.2	137.5	7 = 1991	89/4 90/4
48	3.40% 114.8	118.7	8 = 1992	90/4 91/4